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Introduction to Institutes. — 1

Introductory Lecture to a Course of Theory & practice of Medicine.

delivered Nov.r 7.th 1791
also December 11 — 1793
Nov.r 6. 1794

1

On the Necessity of Combining Theory and practice in Medicine.

delivered November 7.th 1791

+ The College of Philadelphia & the
University of Pennsylvania ~~by~~ consolidated by means
of a Common Charter on the

~~in consequence of which the~~

~~Author was appointed to the~~

of Phys it is necessary to ~~understand~~ be acquainted with the natural history - virtues - doses of medicines of all kinds, as they are illustrated by Materia Medica, and Pharmacy

The theory of ~~Physic~~ medicine has been called its dogmatical - and the practice, its empirical part. They are necessarily united, - altho in all ages, attempts have been made to separate them, and sects of physicians have existed who have been called Dogmatists & Empirics, according as they have professed to be governed by reasoning, or by experience alone + in medicine ~~reasoning~~ ~~by~~

~~Reason aided by experience~~.

In order to ascertain the relative merit of each of these modes of studying

and practising physic, I shall briefly point out the inconveniences of each of them which result from, and then show the advantages, of combining them together.

The Empirical plan of medicine requires a perfect knowledge of every disease, obtained by means of personal experience and observation. — But this cannot be acquired by any one man in the course of the longest life. — For

There are no two diseases perfectly alike, [illegible] their age - habits - and peculiarity of Constitution climate & Season give to each of them a variety that eludes the grasp of the human powers in their present limited State. —

3 The Uncertainty of Empirics will appear further when we consider how very few Physicians have agree in their Accounts of the same Medicines, and how much the credit of the most celebrated Medicines has fallen; upon their becoming generally known. — Of this Bards Drops — the Sal Rochelle — and Turlington's Balsam furnish us with remarkable instances. Upon all that has been said in favour of the certainty of Experience and the Uncertainty of Theory, if I believe with the many late Authors are, that false facts (if the Experience may be allowed) to One false theory, to be found in all our Books of Medicine. //

2 There is a in the mind of every man
a disposition to ~~en~~, ~~in his Breast~~
from the partiality he entertains for
his opinions
~~our~~ own ~~inventions~~ in Medicine. ‡ The
~~Sabastany~~ efforts of Nature are often mis=
=taken for the effects of a favorite remedy,
and in some instances, the crisis of
a disease has been ascribed to Remedies
which have ~~it~~ been thrown out of
behind a fire.
a window, or emptied ~~into the Garden~~

~~pot~~. V

4 The knowledge of the Empiric is confined
wholly to ~~the~~ his memory; now it is
well known this ~~power~~ faculty of the mind
is last forward to Senescence, and
that it is the first which fails ~~the~~ dear

v ~~Peculiar~~ Fun Empiricus annuales
accurately, more than the two or three
last years of their practice. —

as involuntary
v ~~as involuntary as~~ as much ~~a company~~
~~One as respiration~~, or the motion of the heart,
~~are~~ is ~~one~~ an involuntary act of the body. all
Phys: reason —

[The only difference between the Empiric &
a Dogmatist — is the former ~~was~~ by
renouncing the aids of reason]

~~The Effects~~ 6

Of disease and age. ÷ V

Whatever the pretensions of the empiric
may be to experience alone, yet there
never was one of the this sect of phy-
=sicians who did not reason in medi-
=cine; — for this act of the human mind is
=cine; — The writings of Hippocrates the
=brother was of the most celebrated Empirics
in the world, abound with theories, and
all subjects. I believe no empiric ever
gave a medicine, without describing
a direct indication of Cure in his
mind. Some acid humour is to be obtunded.
— Some viscid fluid is to be thinned,
or some acrid matter is to discharged,
from the body in all his prescriptions.
Should it be asked how it has

There is no exception to this remark,

~~mankind seem made to be go for~~
~~deception~~ - hence we find men who
reject the dominion of kings & priests
yield up their judgements implicitly
~~to the direction of~~ a family Physician.

I conclude therefore that experience
alone is insufficient to conduct us to
regular & successful practice in medicine.

~~Let us next examine the~~

Equal

happened that ~~Quacks~~ Empirical have been more
fortunate in life than ~~regular bred~~ Dogmatical physi-
-cians, ~~who~~ I would answer, that ~~they~~
their ~~Success~~ (as far as it relates to the
~~profession~~ emoluments of the profession) ~~are~~ is derived
from the ignorance of mankind. They
promise great things; - their occasional
cures are magnified, - and their more
numerous acts of ~~murder~~ or homicide
are concealed, or denied by their patients,
- for it is an old & a true saying "that
Quacks are
the greatest Lyars in the world, except,
their patients" / V
~~the people who employ them~~" —

If experience without theory is in-
-sufficient to guide us in the practice
medicine
of ~~physic~~, ~~what shall we~~ say of theory

without experience? many difficulties
oppose themselves to an attempt to cure
diseases ~~without~~ by theory alone. These
difficulties are

1 Our imperfect knowledge of the Structure of the
human body, more especially of the
brain & Nervous System.

2 Our ignorance of the manner in which
impressions from external bodies are
produced upon the human body,

2 The limited extent of the human Un-
derstanding, which as yet is incapable
of acquiring truth by simple intuition,
but which still requires the aid of
experience and Observation. —

3 The weakness and perverted State of

V.s to prescribe medicines to alter,
certain supposed morbid acrimonies in
the blood, ~~and~~ It was from a similar
~~for preconceived error in pratiology that~~
~~Dr Brown and~~ belief in the sedative
operation of Opium that Dr Cullen
prescribed it in the ~~most~~ inflammatory
stage of madness, and it was from a
belief that disease consisted in debility,
that Dr Brown prescribed stimulants
in many diseases of the most violent
nature. Theory is exp: worse than exp.
always leis vague Theory. Navigation - One pocket
all - One key - a whole Cabinet.

the passions ~~were~~ increase the Uncertainty
and danger of depending upon Theory alone
in the Cure of diseases. ~~Vanity is a~~
& Great & even good ~~quality~~ men have often
~~predominating~~ ~~fortune~~ ~~in the business~~
been misled by
~~vanity~~ an attachment to a theory
imaginations.
which is the offspring of our own
~~is apt to mislead us in all our inquiries~~
~~in medicine~~. It was this Attachment
to theory that induced Dr Stahl to
trust to his Vis Naturæ medicatrix in the
cure of nearly all diseases.
cure of ~~Consumptions~~. It was the same
~~self deception~~ that led Dr Boerhaave to
prescribe Cinnabar of Sulphur to remove
Obstructions in the Viscera - and it was
from a similar partiality to a
preconceived idea in physiology that

v delusion that led him to use opium
& brandy in every Species of the Gout - a
delusion which was the ~~occasion~~ cause of his own
death, for he died under the operation of
a dose of Opium taken at an improper
time, and in an improper dose.

Sauvages Fevers of Helvetius: the Miasmata med of Stahl,
the Spasm of Hoffman - the Acrid Animony
Broussais - debility existing as the causes of fevers
v ~~occasioning~~ ~~in~~ ~~febrile diseases~~, have
more than the sword
slain, in every age & Country where
they have prevailed. ——

Dr Brown ~~denied~~ to deny the efficacy of Blisters
in Continued, and of the Bark in
intermitting fevers. — It was the same
such are the difficulties, and such
the effects of theory, unsupported by
experience, in medicine. It is a com-
=mon thing to inveigh against the mischief
which has been done by Quacks in all
ages, & in all Countries, but I believe
as much, if not equal mischief has
been done by regular bred physicians
under the delusion influence of theories
Doctrines
theories. — The theories of Contraction to the

It is by the union of Theory and experience
only that medicine has been advanced,
or that a physician can become a

in his profession.

useful or respectable. ~~Characters.~~ After
~~in medicine~~
many Centuries of idle Speculations, phy=
=sicians have at last awakened to a
sense of the importance of ~~facts~~ Observation
in Medicine. ~~and~~ Societies have
been instituted for the ~~express~~ purpose
of collecting, and preserving facts, the
result of which has been a total change
in the principles and practice of physic.

For just theories as naturally follow
just and extensive
~~true~~ Observations, as vegetation succeeds
to
to heat and moisture, or vision, the
~~presence of the~~ light of the sun. —

The influence of theory supported by
in Medicine
experience ~~alone~~ is illustrated by the
effects which philosophy has had in

improving the chemical & mechanical
Arts. — How numerous have been the
discoveries in ~~Optics~~ the different species
of glass, more especially in those forms
of it which have been made use of to extend
our vision to distant or minute Objects,
since the properties and laws of light
have been ascertained by Sir Isaac
Newton? — and how great have been
the discoveries & exploits of mankind ~~in Navigation~~
since the application of the Loadstone &
~~the Loadstone~~ to the purposes of Navigation!

Observation produces truths in succession.
~~Why was Theory to~~ [like a gage measures
truths of the same dimensions in every
part of Nature, and thus] produces clusters

~~not~~ a single just principle often applies the place of an hundred facts, and explains the cause of many ~~diff~~ phenomena. Thus just a knowledge

~~It shortens~~ ~~added~~ ~~exalts~~ advances youth to old age, and places the young grey hairs upon a footing with ~~grey hairs~~ in the practice of medicine.

And that man (for a physician he cannot be) who exalts theory at the expense of experience, & experience at the expense of theory must be integrity or deficient in ~~integrity~~ Understanding.

as a Religion &c. sup: 25 of 1 Vol.

of them at once. Observation ~~creates~~ may
be compared to a power which creates
an alphabet, while ~~theory~~ by placing
its different parts together, creates
words and ideas.
~~Science and Facts~~. — Observation is to
theory, what confused sounds are to har-
=mony. It is theory which imparts life
to facts. ~~Without it, they die~~ By means of
Theory we shorten the road to truth
in Medicine. The Union between
Experience and Theory in Medicine is absolutely
necessary to
to constitute a Science of Religion
& morality, - Law & liberty, - Virtue &
happiness, are not more necessarily united,
that Experience and Theory are in successful
treatment of diseases, ~~+~~ all physi-
cians agree.

The most speculative physicians are
generally the greatest Collectors of facts.
Principles, They are the food of facts,
and hence we find the greatest Collectors
of them are Practical physicians. Thus

There are ~~are~~ two more circumstances in favor of Theory in physic, ~~and~~ which deserves to be mentioned. It disposes to attend to facts, and thereby to multiply them. A man who walks about a field in search of plants of a particular class, will discover more of them than a man who ~~only wanders~~ in passing thro' the same field has no such objects to ~~fix~~ arrest ~~the inquisitive~~ his attention. I grant that Theories have often been suggested by facts, but these facts at first have been of a solitary nature, and ~~they have~~ we generally find that by suggesting theory they lead at once to other congenial facts, which without it, would never have

the application of

It was by ~~the success of~~ the theory ch
W.
Dr Sydenham had formed of the
confluent small pox ~~the~~ Dr Sydenham
to all other inflam fever
~~was led to the plague with~~

~~the same remedies which proved~~
successful in it.

It was thus Dr Sydenham was led
from his successful treatment of the small
pox, to apply similar remedies to
inflam^d fevers of all kinds.

~~Let us not attempt to divide~~

li

been overlooked from their repose in the bosom of nature.

2 In speaking of Empericism ~~of the~~ ~~accurate that no two diseases are~~ took notice of the Variety in the Symptoms ~~possible~~ are alike - all Circumstances of the case being taken in Consideration. In case which occur frequently to the oldest practitioners, experience can afford no assistance. Here theory steps in, and by analogy, leads to a safe & successful mode of practice.

To these arguments in favor of the Union of ~~Theory~~ & principles and Observation in physic, it has been objected that an attachment to Theories in Medicine, is apt to mislead Physicians. - I grant this to be the case where

~~Experience~~ is made to yield to theory. But
a prudent physician will consider
the imperfection of all Theories, and will
not fail to distrust them when they conflict
with facts. For example,
~~if~~ A physician ~~has adopted the doctrine of the~~
~~specific cause of intermitting fever~~,
he will not in all cases, be under all
circumstances refuse to use the Remedy
of Bleeding in an intermitting fever
however contrary it may
be to his theory of ~~fever~~ disease, ~~disorder~~ if he has
seen it tried with success in 99
the Bark
cases out of an hundred, after every
other
tonic medicine has been tried to
no purpose. ~~go to 35~~ In the
~~[illegible]~~ progress of medicine towards

its present state of improvement different
theories have been proposed by different authors.
Hippocrates - Themison - Aurelian - Galen
among the Arabians
Asclepiades have all proposed Systems
of medicine which have flourished for
a while, in succession to each other. You
will find a particular & entertaining
Acc[t] of each of them in Blacks history
of medicine: They are all imperfect,
unsatisfactory
& some of them absurd, because they do
not embrace any of those numerous
discoveries in Anatomy - physiology -
materia medica - Chemistry - and
natural philosophy which have been
been made within the last twenty
in Europe. Perfection in medicine can
never be expected, till we arrive at

perfection in other branches of science,
for truth is an Unit, and all its concur-
-rous particles must be collected ~~together~~
before we shall be able to behold any one
of them in a perfect state. Medicine may
therefore be compared to a well built
Arch which rests not upon a part, but
upon the whole of the materials which
support it. —

The Physicians of the present day
are divided chiefly between the Systems
of Dr Stahl - Dr Boerhaave - Dr Cullen -
& Dr Brown. —

Dr Stahl lived & wrote in Germany
among a people of the most simple
manners. Their diseases of course
were simple, & such as were often

cured by the simple Operations of Nature
without the Aid of Medicine, — hence arose
Dr Hahl's high Opinion of the "Vires Medi-
-trix Medicatrices", or of the existence of
the Anima Medica in the human body.
- we shall shew hereafter the weakness
of this supposed healing power, in nature in the most
simple diseases, and the pernicious
tendency of it in those Artificial
diseases which are produced by the Cus-
-toms of civilized life. —

2 Dr Bonhaam lived & wrote in a
Country where a moist Atmosphere, &
an exclusive Quantity of unwholsome Animal Diet,
produced an immense number of
the diseases of the Skin. These were

supposed to arise from an impure
state of the blood, and hence Contor-
tonicity - & acrimony - in that fluid,
were supposed to be the proximate can-
-ses of all the diseases of the human
body. ——

3 Dr Cullen - a Country
lived & wrote in, which
indolence & luxury have let loose, a train
of
new diseases. These diseases appear to
be seated chiefly in the Solids, - & pertain-
-ing in the nervous System, - hence
the System of Dr Cullen is founded upon
the discovery of those laws, & properties,
of muscular - arterial - & nervous
fibres which have been unfolded by
the phenomena of the present Artificial

~~v has done much more. &c~~

It is to be lamented that after ma-
-king war upon the operations of nature
for some years, he relapsed in a belief
in her healing powers. In his concentra-
-ted views of the nervous system, he has
overlooked ~~the blood~~ or but slightly
glanced at the pathology of the blood:
-vessels, and by adopting the nosology of
the physicians on the Continent of
Europe, he has unfortunately ~~added~~
~~retrained all improvement~~ led ~~to a substitution~~
physicians to prescribe for the name
of Symptoms, instead of the proximate
cause and grade of diseases.

diseases of Great Britain. The writings of Dr Hoffman contain many of Dr Cullen's principles, and facts, but his works notwithstanding may be considered as truly Valuable. They abound with original matter, and their effect has been felt in every department of the practice of Medicine. Had he done no more than exposed the errors of Systems he would have deserved well of his profession. But he has superadded to the Causes of Nervous Systems, and has referred them to their seats in the solids of the body. — In the System of Dr Brown we find clear & opp: 23.

He Brown has happily & successfully exposed the impracticability of Dr Cullen's nosological Arrangement of diseases, and has reduced their numbers from several hundreds down to two, which he calls Sthenic and Asthenic. To the former class belong 97. To the latter but 3 out of an hundred. The remedies for the Cure of the Asthenic diseases are Stimulants, and these consist chiefly of Wine, and ardent Spirits, vol: Salt - Opium & other. - His remedies for Sthenic diseases are moderate bs. - Cow pox & cold Air.

I shall hereafter examine this division of Diseases more accurately, and shall I hope then lay before you a more simple

go to p: 240

we find many of Dr Cullen's 22 Divisions controverted, & ~~hypothesis of Brunonian~~ some of them completely refuted. ~~controverted all, and refuted some~~ ~~of Dr Cullen's Division~~ He supposes that 97 out of an 100 diseases depend upon debility, and that the cure of them depends upon the use of Stimula= =ting Medicines. From his attachment to this class of Medicines he was known in Edin^r by the appellation of "Stimulating Brown." ~~His Nostrum consist~~ chiefly of Wine - Ardent Spirits - Volatile Salts - Ether & Opium. + He reduced all Diseases to two classes only, Sthenic and Asthenic, or diseases of Strength & debility, & he reduces Medi= =cines of all kinds to two classes only

of Theory
view, that that given by Dr Brown.

~~while Subject~~ Error in principle

is generally connected with Error in practice.

Dr Brown was an unsuccessful practitioner,

and his pupils who have adopted

his principles in their utmost extent, have

been equally unsuccessful, But medicine is under

great obligations to him: for his just views

& clear & comprehensive view of the

The Doctrine of Animal life — of heat & cold,

Agency of stimulus; & what are called Sd: medicines — also of the

Application of stimulus to the production of diseases.

2d3: Stimulants & Sedatives. If this division of diseases and remedies should appear to be well founded, I hope to prove hereafter that he has mistaken not only the stages of the disease in but even many of the diseases themselves in which his two different classes of medicines are proper. This practice in most cases is absurd and even dangerous. I shall not be surprised at this when we reflect that his acquaintance with diseases was taken chiefly from cholera. But under all the disadvantages of a want of experience, and knowledge of diseases, and of a dissipated life, he has conducted our science with several new principles

V But with these original or first Opinions, he has blended many errors ~~learns of which are~~ in his System of Medicine. I shall hereafter take notice of each of them. At present I shall only say that I cannot admit with ~~it~~ him debility to be a disease. ~~The the~~ equality of excitement in the morbid state of the body. I shall reject likewise his division of diseases. ~~Instead of admitting~~ ~~We posterity will do this justice.~~ It is a predisposing cause, a Symptom, & Consequence of disease only. ~~I shall likewise reject his division of diseases, and adopt~~ en. ~~Dease~~ Disease consists simply in morbid excitement which is always partial. Of course I reject his division of diseases into Sthenic and Asthenic, and his Doctrine of equality of excitement in the morbid states of the body. Disease is an Unit, ~~which it be of i and is always~~

~~Medicines~~ which in prudent hands
may be of extensive application in
practice. He has clearly demonstrated
the stimulating effects of heat, &
the sedative effects of cold. He has
established the stimulating powers of
Opium - and has proved that in
most cases sedative ~~the~~ effects of Medicines
consist in an abstraction of
of Stimulus. He has moreover
~~D~~ upon the Operation of the passions
in the production & cure of diseases he
has shed a great deal of light, for
which posterity will be grateful to him.
~~His~~ The Doctrine of Animal life as he has illus-
trated, will always
[illegible] to our
views Obligations to Dr Brown,

and is always accompanied with unequal excitement. ~~Health~~ The cure of disease consist in restoring ~~this~~ it to its usual & natural diffusion ~~throughout~~ every part of the System. If Dr Cullen did Confine by direct ing the Attention only to the name & Symptoms of diseases ~~which~~ without a due regard to the states of the System, how by Dr B much more mischief has been done by ~~distracting~~ withdrawing attention from names & Symptoms and ~~prescribing for the~~ confining ~~all~~ prescriptions ~~wholly~~ to one state of ~~the System~~ to that State of the body is but an accurate Symptom of disease viz debility, prescribing one class of cures only to remove his [illegible] debility? — This

but it appears from the practical parts of his works that he was unable to profit by his own discoveries. As far as I am capable of judging, they contain Opinions, and pre=
=cepts that are absurd, and dangerous in a high degree. I declare this pub=
=licly that they do not accord with my Observations and experience, and that they are extremely unsafe in Great Britain in the diseases of our climate.

A perfect System of Physic may be compared to a House - the different Stories of which have been built by different Architects. - Each of them has a claim upon our gratitude for attempting to providing us with a shelter from the

~~and for having advanced the fabric, of medicine~~ building up by laudable means from ~~by~~ advancements to ~~from~~ its present height. We hope the discoveries of a few years will place a ~~roof~~ cover upon this building, and thereby complete the ~~fabric~~ edifice of medicine. ——

Should it be asked, which of the systems of physic that have been mentioned, I shall adopt in the ensuing course of lectures, I would reply no One of them.

As in the different systems of religion truth, and error are divided, ——

in different proportions among all them, in like manner, of medicine I suppose that no system is to entirely false that has not some

v I shall therefore select from the
Systems of Dr Boerhaave, Dr Cullen &
Dr Brown such principles as I believe
to be true, and shall add to them such
Others as have been suggested to me by
my own reflections & Observations. ~~& p 27 to~~
~~A Course of 40 years Study & practice~~
In the Course of these
lectures, I shall not be deterred from
conjectures, where demonstration cannot
be Obtained. Should these conjectures be
erroneous, they will notwithstanding serve
the cause of truth, for I believe with Mr
Fontanelle that the number of false
Opinions is limited. Every unsuccessful
Conjecture therefore removes a part of
the rubbish which obstructs the avenue

truth in it, and [illegible] true, that
has not some error blended with it.

I shall therefore examine all the aids that
I am able from each of the systems
have been drawn, ~~particularly from~~
~~Dr Cotton's & Dr Popkin's~~ but I shall add
to them principles of my own, which
I hope to establish by facts, and which
~~I hope to establish by facts, and which~~ I hope to prove [illegible] the
result of long & faithful attention to
& faithful observation, and which seem
which I conceive to be accommodated
peculiar
to the present state of citizens
in the United States. ↓ go to page 33

To persons accustomed to receive
knowledge of every kind from the other
side the Atlantic and to view human
genius on a more extended scale in
the enlightened countries of Europe
than in America, it may appear

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to truth, and ~~that~~ thereby contributes
to the stock of future inquiries.

nor shall I neglect to lay facts
before you where I am not able to
connect them by a principle. Simple
truths upon all Subjects seem to possess
a Species of elective attraction for each
Other, and in order to exert this power
it is necessary they should be ~~contiguous~~
~~constant, and this can only be done by~~
~~this being~~ brought to light, & sounded,
~~so~~ by which means they are prepared for
the hands of ~~inquirers~~ Speculative men
to combine into principles. It is in this
way, most of the discoveries in Science have
been made in all ages & Countries. —

I dare not promise ~~anything~~

bold for a ~~profession~~ Tenure in an American Seminary to propose a new ~~system~~ principles of physic. — But I have weighed the consequences of my Undertaking. I am I am aware of the consequences prepared for the issue of ~~my~~ a failure in it — very more — I am prepared for the issue of it's being successful, ~~adopted~~ — for I will know — that the more it prevails, these principles the more I shall ~~risk both~~ ~~sacrifice~~ ~~incur~~ of ~~loosing~~ sacrifice of what is consid^d most valuable by in the reputation or profession:

It is with extreme reluctance that I am forced to yield to the necessity of saying anything of myself in this place. But to prove that the principles which I propose to teach are different in many particulars from the principles of Dr Cullen or Dr Brown, & that where I shall coincide with

D^r Brown, I am not indebted to him, I ~~shall~~ beg leave to lay before you the following facts. ——

In the year 1773, I first used Bleeding ~~introduced the practice~~ in the Case of Obstinate Quotidian & Intermittents. This practice, & the theory on which it is ~~both~~ founded is directly contrary to the theory & practice of D^r Cullen's in his treatise upon fevers. —

In the year 1774 I first conceived the theory of Tetanus which I have publ^d in my Volume of inquiries. The idea was taken from a part communicated to me by D^r Robert of the Island of Dominique. Certainly this theory was not derived from D^r Cullen — for his treatise upon that disorder, (tho' it confirms my principles)

does not contain a hint of the doctrines I have established. ~~I~~ An attempt has lately been made to ~~depraise~~ rob me of this discovery, & I wish much to see it publickly supported, as I have now it in my power to crush the Authors of it with Shame and Contempt.

~~my~~ The application of Opium to the Cure of fevers of the typhous kind was recommended by me in my Lectures in the year 1789 immediately after I left the hospitals of the United States. Of this I have many proofs. One of them is now in the hands of Dr Currie in this city.

The ~~use~~ use of ~~cold~~ cold in fevers of too much action, and of heat in fevers of the low & typhous

Strongly recommended
kind is ~~clearly~~ ~~marked~~ in my lectures
on the small pox delivered in the year
1780 & since published in the Volume
of enquiries just now mentioned. —

the
The idea of Consumptions being a
first a local disease,
general disease, & of its being curable only
by general remedies, who ever
first
by general remedies, who ever
About
to my pupils in the year 1782, I have
since published it in the Volume of
inquiries. —

In the three last opinions I have
coincided with the late Dr Brown. It gave
great
me pleasure to find myself so ably sup=
=ported, but I must hasty tell you that
~~they~~ I could not have derived a hint
of any of these opinions from Dr Brown,
for I never heard that he was a

teacher of medicine till the year 1785, &
I never saw his words till the year 1789.

But Gent: these are only a ~~few~~
few of the points in which I have
differed from Dr Cullen, ~~& disunited with~~
~~Dr Brown~~. My ~~the~~ theory of fevers - of
- nervous diseases - and of Dropsies differ
widely from both ~~of them~~ Dr Cullen's & Dr
Brown's. - I ~~do~~ shall deliver them with the
~~should be afraid to~~
more confidence in consequence as I have
~~as I did not~~ experienced their
certainty
~~safety~~ and usefulness in the cure of the
K
diseases whose causes ~~they~~ I hope are
explained by them. ——

In mentioning these things, I desire
thus publicly to acknowledge my Obliga-
-tions to the great ~~Author~~ Father of
~~the~~ mankind for
having made use

of me as the humble instrument of
conveying the smallest portion of hapi=
=ness to any of his creatures. I can
~~This is~~
ascribe it only to that infinite ~~love~~
goodness
=kindness which acts with equal
sovereignty in ~~confirmed and obliging~~ by
choosing the things which are weak, in
Science and as well as in religion, ~~in order~~
~~to confound the pride of human learning~~
to be the vehicles of his mercies to the
children of men.

In delivering ~~the~~ my principles of medicine
I do hereby
~~I solely myself~~ to teach anything
~~which I do not believe, or understand~~
~~I will go further~~, and promise that if
I should immediately be led to com=
=municate an opinion to you that
subsequent observations or reflexion

~~Should~~ Shall discover to be erroneous, I shall publickly retract it; for I consider truth only to be knowledge, and that an attempt to defend an error, is only labouring to be more ignorant. —

Nor shall I be detained by the fear of falling into mistakes from venturing to deliver conjectures, whose demonstration cannot be obtained. Should these conjectures be erroneous, they will notwithstanding serve the cause of truth, for I believe with M^rs Fontanelle that the number of false opinions upon all subjects is limited. Every successful ~~imp~~ conjecture therefore removes a part of the rubbish which obstructs the Avenue to truth, & thereby contributes to the Increase of future inquiries.

V

much less shall I

~~now shall I attempt~~ be deterred

from mentioning facts when I

cannot explain the causes of them.

~~It was~~ by It was collecting & publishing

solitary facts that Lord Bacon & M^r Boyle

laid the foundation of most of our

systems of philosophy. — simple

truths upon all subjects seem to possess

a species of elective Attraction for

each other — and in order to exercise

this power it is necessary they should

be brought in contact — and this can

be only be effected by their being

made so public as to excite general

attention & Observation. — It is in

As moral Good is known to Mortals
only thro' the medium of moral evil, so
perhaps truth can be discovered by them
only thro' the medium of error. V

Much yet remains to be known
in Medicine. — ~~I suspect~~ As there is an
immense desert of what is called terra
incognita in the human mind yet to
be explored and described, so I suspect there
are many laws and principles in
the human body yet to be discovered.
— One thing is certain — that all our
systems of physic will necessarily be imperfect
while there exists a single disease which
we do not know, or cannot cure.

But let us not be discouraged by the
present limits of our knowledge in

this way that Dr Black & Dr Priestly have laid the foundation for most of the modern theories in Chemistry.

The circulation ~~of the~~ and component parts of the blood - the extent & uses of the Lymphatics - ~~the pores~~ are so long mysteries in the oeconomy of Physiology. much light has lately been thrown upon the doctrines of digestion - Chylification - Respiration & generation - From the traces of ingenius upon these difficult subjects - may we not hope that the time is not very distant when the veil shall be removed from the ~~operations~~ of the brain, & the nervous system, and the obtuse operations

Physic; on the contrary, let us recollect
of the diseases operations of the animal
how many diseases are subject to
Oeconomy are now known to us
which a few years ago eluded
our investigation. The Intermit. fever
the power of medicine. The Intermit. fever
and the small pox have ceased to be
mortal disorders. The last of them
according to Dr Wyt used to carry off 1/10
of the human race before the discovery
of Inoculation. In the Firth of the Forth
near Edin.r there is to be seen from
the town of Leith, a small island on
which persons infected with the Venl.
disease were doomed to punishment
-ment, in a state of exile from their
friends and Society. That disgraceful
disease has long ago ceased to be the
-proach of Medicine, and for the honor

of Secretion & animal life. Let us recollect further how many diseases now yield to our art which a few years ago resisted the powers of Medicine. Turn back to p: 36. The intern[illegible] fever.

Nor is this all. Death has been deprived by his wide avenue to human life by means of the yellow fever. This disease when properly treated is now as much under the management of Art as the measles or Influenza.

of the christian spirit of the present age,
the persons invested with it are included
among the objects of charity and benev-
-olence. But medicine has done more
than this; — by the modern institutions
of humane societies it has encroached
upon the territories of death. Near 1300
persons apparently dead have been restor-
-ed to life by the humane Society of
London in the course of the last 13 years.
Many other diseases might be mentioned
which have ceased to be incurable, be-
-of those which we are unable to cure,
there is scarcely one which medicine
is not able to palliate, & thereby to
smooth the avenues of death.

~~The expenditure for the purpose of promoting~~

V

It is impossible to mention these facts without
laying us to contemplate the blessing when
~~the blessing a hope, that~~ such changes
shall the moral as well physical world
~~are about to~~ take place in our ~~country~~
from
as will render it a more safe & agreeable
abode premature deaths
~~made~~ for man; for ~~the~~ ~~extraordinary~~
(so distressing to mortals)
~~mortality, [illegible]~~ seem to have
arisen from the operation of that
infinite
Goodness which delivers from evils to
come.

Among other circumstances that
might be mentioned, which favour
the cultivation & improvement of
medicine in America, I think am
of opinion that the union of the
business of the
physician - surgeon - & apothecary
in the same person is far from being
the least, ~~however laborious~~ &

Gentlemen — In my Lectures upon Physiology I shall presuppose that you are acquainted with the Structure of the body. I shall therefore spend as little time as possible in Anatomical descriptions.

2 by I shall spend no time in Speculations that do not lead directly to what is useful and practical in Medicine.

3 by I shall consider the faculties of the human mind as an essential part of Physiology, and shall endeavour to describe each of them in a manner

to simple ~~read~~ as to render their
Names and Operations intelligible
to the youngest Student of Medicine.

4ly I shall not depart from the Order
of Dr Cullen & Dr Gregory in blending the
Physiology & Pathology of the different
parts of the human body together. It
will be more natural to imitate
the Order which has been pursued
by those Writers who, first consider the faculties
of the human mind in their perfect
State in the Garden of Eden, before
they describe the Changes which
have been induced in them by
the loss of primeval innocence. —

The order in which I propose to
consider the different subjects of Physiology
as is set down in the syllabus which I
shall immediately put into y^r hands.
After having finished the lectures on Physiology
~~I shall~~ which will include the
~~with a discussion of it~~
history of the body in its healthy state, I
shall proceed to that 2^nd part of the Institutes
~~viz~~: which is called Pathology. ~~I shall~~ The
subjects of this part of our course are
likewise set down in ~~the~~ the syllabus.
They begin with an account of a simple
disease, and afterwards embrace all
the remote - predisposing - occasional,

In like manner I shall ~~therefore~~ first consider the human body in its healthy state, and afterwards proceed to mention the changes which have been produced in it by the action of Diseases. Those bodies and those which have originated in Moral & natural evil.

In my the lectures upon Pathology I shall first consider the action of re- & predisposing =mote Causes upon the ~~human body~~ body. These are what are improperly called the Nonnaturals - They include all the sensible & insensible qualities of the Air - ~~&~~ contagious - poisons -

& proximate causes of diseases. Under this head, I shall introduce all my peculiar opinions & principles ~~in Medicine~~ as far they relate to the Causes of Diseases. The 2nd part of the Pathology will include the history of the Signs and Symptoms of Diseases. This

This Syllabus Gent: is very imperfect. I shall probably deviate in some instances from the arrangement of some of the Ch ~~Ch~~ Such as it is I lay it before you. Time & future reflections I hope will supply its difects. —

Aliments - Drinks - the passions of the
mind & the action of the Understanding -
Drugs - Amusements - the different occu-
-pations among mankind - Adventitious
Customs - and lastly the influence of
religious Government - religion - & the different
States of Society upon the human body.
I shall consider each of these causes
as acting 1st upon the whole System,
& 2dly upon particular parts of it.
2dly After having enumerated all the
various Clases of remote & predisposing
causes to disease - I shall next proceed
to describe the changes which they
induce upon the whole, or upon parts

of the human body. This will
constitute a history of the proximate
causes of diseases. ——— For Example
In describing the effects of the alternate
Action of Cold & and heat upon the
human body, I shall naturally be
led to explain the proximate cause
debilitating or stimulating
of fever. In describing the effects of the
Passions, upon the human body I
shall naturally be led to mention the
proximate cause of Heat of the Thyphon-
-drasis - Hysteria - and on account of so
on, of, all other general diseases. ———
Local diseases will come
next under our consideration. These

will open an immense field for inquiry, and observation and instruction. For example.

In treating of the pathology of the brain I shall endeavors to explain the cause of Hydrocephalus & idotism - In treating of the pathology of the heart - Arteries I shall describe the diseases of aneurism - Ossification - and all the morbid phenomena which occur in the circulation of the blood. - In treating of the pathology of the stomach - I shall mention & describe all the morbid phenomena of the appetite, and of digestion. So on of every other part of the body. I am aware of the difficulty

of this part of the 46 course from the
general and partial operation of the
same causes, and from the sameness of
effects which are frequently produced
by different causes. — But I shall en-
=deavour to overcome ~~them~~ by these
difficulties by describing these diseases
~~at~~ the first time they occur, and afterwards
by (~~only~~ barely mentioning them).

The Therapeutics which form the
third part of the Institutes of Medicine,
belong in my Opinion more properly
to the other professorships. ~~of Isaetsia Medica~~
~~& the Practice of Physic~~. I shall

therefore declining saying any thing
upon the virtues of Medicines, or upon
the symptoms & cure of diseases ~~except when~~
~~it can be necessary to pronounce upon~~ but
both
they will be treated of in the most
ample manner by the Professors
of Materia Medica, and the Practice
of Physick. —

will
The Clinical Lectures form an im-
portant and material part of the
instruction which will be delivered
from this Chair. In conducting these
begin by delivering
Lectures I shall ~~first~~ ~~must~~ ~~satisfy~~
a few Observations upon the
~~method~~ ~~cases~~ which ~~occur~~ in the
method of visiting and examining

patients — I shall then proceed to ~~hospital and examine~~ point out the usual signs of diseases more especially as they appear in the pulse, and ~~the method of acquiring it~~ and

afterwards exemply these preliminary remarks upon in the publick examination and treatment of such cases in the hospital as afford the most practical instruction. I shall keep an exact account of the diseases & remedies of every patient, and publickly shall twice in every week deliver a report of each of them, with occasional remarks, and afterwards I shall deliver ~~circumstances shall dictate~~, one two or more lectures upon every case, so as not only to explain the case

V Here bring in Stahl, Boerhaave's
de Theories &c —

V I am very sensible of the
difficulty of the business before me, and
& it is no Affectation of humility when I add that
~~The Theory of Boerhaave Physic may be esteemed~~
I am unequal to the task proposed upon it.
~~and as the forlorn hope among the Professors~~
~~ships of Medicine~~ But it must be ~~es-~~
~~-teemed~~ undertaken by some body, ~~for it~~
~~The~~ it is impossible to enter into the fabric
of a regular system of practice, Unless a breach
be made in it by Theories of some kind. It
would be some consolation to those persons
who are destined to these dangerous enter-
-prises, could they look forward to a moderate
share of the benefits which attends them when
they prove successful —, but this is so far from
the case that they generally perish in the
Gaps which they have opened, ~~or~~ while
they very who condemned ~~or vindicated~~ their
~~these persons, whose flattering or feverish Hardi-~~
temerity
~~-tendings~~ steps them, and enjoy the triumphs

best the disease labouring under which the patient shall labour! To render this part of my Course as complete & as useful as possible the Managers of the hospital have kindly offered the University the exclusive use of a room to be called the Clinical Ward, where all the clinical patients will be collected, and where they will be examined in the presence of those Gentlemen only who propose to attend the Clinical lectures. The patients, and prescriptions will be open at all possible & open at all other times to all.

which have been acquired for them.—
I enter upon it relying on your candor
~~I have but~~ (under all those discouragements)
I shall not however ~~delay~~ relax
in my labors to discover & establish
just principles in the subjects before
us. ~~as will be useful~~. Should I fail in
~~my~~ this arduous Undertaking, I shall
~~still~~ still maintain ~~the rectitude~~ that
~~of my~~ intentions in medicine.
— It is like Woolsey's road to ho:
is the only
=nor — "safe and safe one" — to use
in medicine
=ful practice, — Altho' I should be
forced to add, in the words of the same
unfortunate prelate, — that "your master
misled it!" ——

The end.

the Students who attend the practice
of the Pennsylvania hospital. I ~~shall~~

~~I shall conclude this course~~

I shall conclude this course,
of lectures
~~of lectures by delivering some Discourse~~
~~which shall contain a~~ by delivering
~~lecture upon the Application of the~~
principles of medicine to explaining cer-
-tain passages of the Old & New testament.
and by a short account of the
epidemic diseases of every month
of the present year from the 1st of
January to the 1st 1791.

Three Gentlemen Intended to
have concluded my introductory
Lecture, but ~~I cannot~~ upon receiving

~~Ich mag dies Abbrechen~~

mag fall

what I have delivered, I am forced to

detain you a ~~few~~ minutes longer
modesty
while I declare without any affectation of ~~a~~ ~~boast~~
~~which~~ ~~inform you that I have not~~
that I am as yet
~~present~~ unprepared to ~~teach~~ deliver a com-
plete Course of Physiology & Pathology,
& I ~~have~~ publickly ~~taken~~ without
any affectation of modesty, that I
was as yet unqualified for the under-
taking ~~and that I suppose~~ a misapplied
confidence
~~was the motive~~ to facilitate the Union of the Med. School &
in my zeal to advance the interests
estimate
of Medicine, rather than a just esti-
mation of my talents has led me to
the arduous task.
undertake it - It is now nearly above
20 years since I have It would require
as many years as I have had weeks

go to p: opposite 50, & conclude with it.

V. I am aware therefore how much ~~that~~ I risk my little all by the present undertaking. — If I fail in executing it, I hope I shall be indulged in one claim upon the public — and that is — the humble merit of having sacrificed to y^e^ union of the medical Schools, & the advancement of the interests of medicine, my own reputation. —

allotted me, to revise, to collect — to
arrange, and to add to my stock
of knowledge upon these Physiological
Subjects. — I cannot therefore
answer for much — I risk by my
present Undertaking, and if I
fail in executing it, I have only
to request that I may be indulged
in claiming the merit of having
sacrificed to the Union of the Medi-
-cal Schools, and the advancement
of the interests of Science, — my
own Reputation.

The Introductory Lecture to the Clinical
Course (which will be public) will be
delivered in this room —

forthwith just principles it is no more
incumbent for any ship to see all the
ports of the body before he prescribes
for it: than it is for a mariner to
know the [illegible] to
visit all the parts of the world. in order to
navigate his vessel to them.

~~disagreeable it may be to combine them~~
~~so as to discharge the duties of each of~~
these three professions with fidelity. They mutually
illustrate and support each other. The
General of an army who is not a Soldier
& an officer, is not a more absurd, and
dangerous character than a Physician
who is ~~not~~ unacquainted with the principles
and practice of Surgery & pharmacy.

Permit me therefore Gentlemen to
recommend to you to bind with your
studies and attendance upon Lectures,
a steady attention to the composition
of medicines, and that familiarity
with diseases which is only to be acquired
by handling the bodies of sick people.
Fothergill - Watson - Hunter, & Cullen

A Gentleman thus educated in Medicine has been very happily ridiculed, by being represented as prescribing purges for the first - Vomits for the second - bleeding for the third, and blistering for the fourth Ward in a hospital - also by receiving a report of the State of his patients pulse at a distance from his bedside by means of a journeyman known by the name of a Pulsefeeler.

all laid the foundation of this know-
ledge & fame in medicine by performing for many
years the common ~~offices~~ duties of Apprentices
in Apothecaries & Shops. — I have witnessed
the conduct, and attended to the fortunes
of many Gentlemen who pursued a
contrary line of conduct to Mine: and
have never heard One of them that who
has risen to great eminence in Physic.
A Student of medicine & a patient, like
Ladies in Chemical Attraction must be
in Contact before they can benefit each
other, and a young man does not act
more absurdly who tries to learn to
swim by reading on Franklin's
Art, than a medical Student

Via Roma thus educated in Cyd Divine,
has been very happily rescued by ~~from~~ ~~being~~ being represented as prescribing
the first
Vomits for a Ward — and purges for
bleeding for the third Fourth
the Second — and Clisters for the Ward
in a hospital — also by receiving a
the State of
report of his patients' bodies at a distance by means
from his patients bedside
of a journeyman — known by the Name
of Philosophers.

dass, who expects to become a physician
~~or~~ ~~by reading books~~ without a frequent,
close, and intimate connexion with
such people. It is indispensably necessary for a
young man ~~in the~~ physician to wear
~~early life~~ down in his youth
with which we naturally enter the
shades of pain & distress; ~~will~~ Otherwise he will
feel more or less of it in every subsequent
period of his life. He will proceed from one
degree of distance and neglect to another
till at last he will refuse to set by the
his patients bed side ~~in the~~ ~~hospitals~~ - He will if
he should become
a hospital physician commit a horrible,
and purge a South ward - and to con-
clude his career of medical pride &
negligence, he will employ a pulsefeeler
who shall report to him the State of that
index of the Strength of the System;
~~Patients disease~~; ~~and~~ for he will not

in your profession

V To acquire a still greater ~~familiarity~~ knowledge of
~~the Languages & method of curing~~
~~with diseases~~, permit me to recommend
to ^ you to set up with sick people in the
critical stages of their diseases. The late
~~of the duration~~ King of Sardinia made it a
essential part of the education of a
young man intended for the army, to set
upon whole nights, or to be called out by
his bed two or three times in the same
night. If such acts of self denial have
been thought necessary to qualify men
for the dreadful art of taking away life
& honourable
how much more necessary should they
be deemed to qualify men for the divine
one
Art of saving life. During the night
R
on one will be disturbed of the true
State of a disease, by an attentive

contaminate his fingers by touching
the flesh of his patient, altho'
his disease should be free from all the poisons
of infecting him.

To render an attendance upon a shop,
& our Lectures profitable, and it will be
necessary to join with them a diligent
application to books. Upon the theory
of physic, you will do well to read the
works of Dr Brown, Cullen & Lawrence
or top to know what Authors to recommend
to you
Dr Hoffman -
= read to you Dr Cullen & Dr Brown, Gregory
= Cairn in my opinion the most truth
of any Compendium on Authors that I know
upon the practice of physic I can give
no better to recommend to you
or to be top to ascertain great & important
truths of
the prize Dr Cullen - Vanswieten - Fordyce -
Pringle - Monro - Whyt - Fothergill

Student of physic, than by twenty visits
to the same patient in the ordinary day time.
- Even This position in sleep - the state of
his eyes - mouth - and even his dreams
will all afford him some instruction.
But this is not all - the intermissions
of fever often occur in the night, the
to avail ourselves of an opportunity of
administering most effectual for
~~learning in~~ the only medicine ~~of this~~
evening them, it will often be necessary
to examine the pulse every hours of the
night. But this can be done with
case & safety only by persons who
have early accustomed themselves to
the habits of self denial with respect to
sleep. ~~—~~ might here mention the
~~I shall omit mentioning~~

Alexander - Bread - Spencer - Blanchard - Hebenden,
~~These authors may be consulted as~~
~~to the Subjects of this important~~
In reading these authors, you will make due
~~Branch of Medicine.~~
allowances for the difference of Climate - manners
& State of Society in which they wrote. 49 to p: 50 v
so render these Lectures as useful

as possible, I shall accompany them
with clinical remarks upon such cases as
are worthy of notice, during my
attendance upon the Pennsylvania
hospital. The descriptive & history
of the cases for obvious reasons,
only can be taken
down in the hospital. The remarks
(as often as they occur
upon them, shall be delivered in
the College ~~—~~ after, or before our
(with communicating)
other Lectures. ~~—~~

I shall sum up all that has been
~~conclude the course~~
by saying upon the study of Medicine
by recommending to you, Divine all

~~Some~~ one important advantage which you will find from ~~having~~ making yourselves acquainted with the symptoms of early disease ~~in early life~~, and that is the greatest many advantages you will enjoy in this City to prosecute the Study of Medicine, but I shall take notice of only One of them - and that is you will have to study Physic in a Country in which you are to practice it. This circumstance alone should turn the scale in favor of an American medical education ~~in Physic~~. I am satisfied that ~~no medical~~ no instruction in Physic given in an European University can comply in to the minutiae of practice in this Country, and as the systems of Physic are built upon the phenomena of diseases, I am of course equally confident

things, from books, from patients,
and from the public instructions you
will receive in this College } in y^r. studies
principally to facts. That books-that
patients- and lectures - will be profi-
table to you only in proportion as
they suggest facts to your Observation,
and remembrance. — Facts are
the morality of medicine. ["There are
times / says the exellent Dr. Price /
when I was on disposed to doubt tempted
of the truth of every / principle in my
Christian religion / but I never Even
the time when I have doubted for a moment
doubted of the truth of this saying,
" The that walked uprightly, walketh
surely". In like manner, your Gentlemen
]

that no System of Physic framed in Europe can be ~~safe~~ proper or safe in all its parts, for an American Physician. — It was not till the Physicians of Europe laid aside their the Numerations for the writings of ~~the ancients~~ Hippocrates - Galen - and other ancient Authors that Medicine

Return to 44 —

for this List of Authors ~~I have said nothing of~~ I have mentioned ~~Here~~ ~~I have mentioned~~ that you will find no ancient Greecian or Roman Arabian Names. The Dict - customs manners - and habits both in War & Peace of the Nations of Greece & Rome & almost all their peculiar Climates gave a complexion to their diseases ~~of them~~ which render them very different in their causes - Symptoms - & duration

There are times, when I am disposed to doubt the truth of every principle in medicine, but I never yet saw the time the when I have doubted the advantages of Bleeding, ~~or~~ of the Safety, ~~and~~ depending upon the evidence of facts in the treatment of a disease. Theories in medicine are necessarily fluctuating, and must continue so for years to come, but facts like the obligations of morality, will endure for ever.

from the diseases of modern nations

Instead Instead of turning over the

many volumes of antiquity in search

via mystica
of knowledge let me advise you to

=ther to study the book of Nature in the

minds and bodies of sick people. The

fate of Medicine has been a good deal

like that of the two of the fine Arts. While

Poets the English poets ~~painters~~

and nothing but
~~copied~~ Virgil, and the English painters

spent half their lives in copying the

pictures of Raphael & Le Brun, we saw

nothing but Roman Seasons Italian Lucas ~~Springs~~, and

Lucas in painting, and Italian or French

manners in painting. — Thompson

first described the British Seasons, &

our Countryman Wrdsworth first intro=

=duced

the British ~~Minister~~ countenance and
In like manner
manners into his ~~pain~~ pictures. For
many centuries our books of Medicine
consisted only of ~~to~~ idle Speculations,
and transcripts
~~Imported by Hypocrates~~ from Ancient
Authors. — Do wonder these Centuries
~~Inebriated~~ were marked by ignorance and Darkness.

Within the last thirty years Physicians
have exchanged the folio volumes of
ancient learning portable
~~Antiquity~~ for the books of Nature, &
have deserted their closets to set down
at the bed side of their patients. In
this conduct, they have discovered the true
Hippocratic Art of studying Medicine,
it consists
for ~~this Lay~~ not in reading the books
of Hippocrates, but in adopting the
excellent which
Method ~~the~~ he followed with so much

success in acquiring his accurate knowledge
of diseases. ~~I Return to p 46 In~~
In consequence of this change in the
~~the~~ conduct and studies of physicians,
more ~~discoveries~~ improvements have
been made in medicine within the last
a
30 years than were made in ~~many~~
centuries before them. —Return to p 46